



**MEDIA BRIEF**

## Global Press Release

# Planet's Tougher Problems Persist, UN Report Warns

*Nairobi/New York, 25 October:* The United Nations Environment Programme says that major threats to the planet such as climate change, the rate of extinction of species, and the challenge of feeding a growing population are among the many that remain unresolved, and all of them put humanity at risk.

The warning comes in UNEP's *Global Environment Outlook: environment for development (GEO-4)* report published 20 years after the World Commission on Environment and Development (the Brundtland Commission) produced its seminal report, *Our Common Future*.

*GEO-4*, the latest in UNEP's series of flagship reports, assesses the current state of the global atmosphere, land, water and biodiversity, describes the changes since 1987, and identifies priorities for action. *GEO-4* is the most comprehensive UN report on the environment, prepared by about 390 experts and reviewed by more than 1 000 others across the world.

It salutes the world's progress in tackling some relatively straightforward problems, with the environment now much closer to mainstream politics everywhere. But despite these advances, there remain the harder-to-manage issues, the "persistent" problems. Here, *GEO-4* says: "There are no major issues raised in *Our Common Future* for which the foreseeable trends are favourable."

Failure to address these persistent problems, UNEP says, may undo all the achievements so far on the simpler issues, and may threaten humanity's survival. But it insists: "The objective is not to present a dark and gloomy scenario, but an urgent call for action."

Achim Steiner, UN Under-Secretary General and UNEP Executive Director, said: "The international community's response to the Brundtland Commission has in some cases been courageous and inspiring. But all too often it has been slow and at a pace and scale that fails to respond to or recognize the magnitude of the challenges facing the people and the environment of the planet".

"Over the past 20 years, the international community has cut, by 95 per cent, the production of ozone-layer damaging chemicals; created a greenhouse gas emission reduction treaty along with innovative carbon trading and carbon offset markets; supported a rise in terrestrial protected areas to cover roughly 12 per cent of the Earth and devised numerous important instruments covering issues from biodiversity and desertification to the trade in hazardous wastes and living modified organisms," he added.

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“But, as *GEO-4* points out, there continue to be ‘persistent’ and intractable problems unresolved and unaddressed. Past issues remain and new ones are emerging—from the rapid rise of oxygen ‘dead zones’ in the oceans to the resurgence of new and old diseases linked in part with environmental degradation. Meanwhile, institutions like UNEP, established to counter the root causes, remain under-resourced and weak,” said Mr Steiner.

On climate change the report says the threat is now so urgent that large cuts in greenhouse gases by mid-century are needed. Negotiations are due to start in December on a treaty to replace the Kyoto Protocol, the international climate agreement which obligates countries to control anthropogenic greenhouse gas emissions. Although it exempts all developing countries from emission reduction commitments, there is growing pressure for some rapidly-industrializing countries, now substantial emitters themselves, to agree to emission reductions.

*GEO-4* also warns that we are living far beyond our means. The human population is now so large that “the amount of resources needed to sustain it exceeds what is available... humanity’s footprint [its environmental demand] is 21.9 hectares per person while the Earth’s biological capacity is, on average, only 15.7 ha/person...”.

And it says the well-being of billions of people in the developing world is at risk, because of a failure to remedy the relatively simple problems which have been successfully tackled elsewhere.

*GEO-4* recalls the Brundtland Commission’s statement that the world does not face separate crises - the “environmental crisis”, “development crisis”, and “energy crisis” are all one. This crisis includes not just climate change, extinction rates and hunger, but other problems driven by growing human numbers, the rising consumption of the rich and the desperation of the poor. Examples are:

- decline of fish stocks;
- loss of fertile land through degradation;
- unsustainable pressure on resources;
- dwindling amount of fresh water available for humans and other creatures to share; and
- risk that environmental damage could pass unknown points of no return.

*GEO-4* says climate change is a “global priority”, demanding political will and leadership. Yet it finds “a remarkable lack of urgency”, and a “woefully inadequate” global response.

Several highly-polluting countries have refused to ratify the Kyoto Protocol. *GEO-4* says: “... some industrial sectors that were unfavourable to the... Protocol managed successfully to undermine the political will to ratify it.” It says: “Fundamental changes in social and economic structures, including lifestyle changes, are crucial if rapid progress is to be achieved.”

Among the other critical points it identifies are:

**Water:** Irrigation already takes about 70 per cent of available water, yet meeting the Millennium Development Goal on hunger will mean doubling food production by 2050. Fresh water is declining: by 2025, water use is predicted to have risen by 50 per cent in developing countries and by 18 per cent in the developed world. *GEO-4* says: “The escalating burden of water demand will become intolerable in water-scarce countries.”

Water quality is declining too, polluted by microbial pathogens and excessive nutrients. Globally, contaminated water remains the greatest single cause of human disease and death.



**Fish:** Consumption more than tripled from 1961 to 2001. Catches have stagnated or slowly declined since the 1980s. Subsidies have created excess fishing capacity, estimated at 250 per cent more than is needed to catch the oceans' sustainable production.

**Biodiversity:** Current biodiversity changes are the fastest in human history. Species are becoming extinct a hundred times faster than the rate shown in the fossil record. The Congo Basin's bushmeat trade is thought to be six times the sustainable rate. Of the major vertebrate groups that have been assessed comprehensively, over 30 per cent of amphibians, 23 per cent of mammals and 12 per cent of birds are threatened.

The intrusion of invasive alien species is a growing problem. The comb jellyfish, accidentally introduced in 1982 by US ships, has taken over the entire marine ecosystem of the Black Sea, and had destroyed 26 commercial fisheries by 1992.

A sixth major extinction is under way, this time caused by human behaviour. Yet to meet our growing demand for food will mean either intensified agriculture (using more chemicals, energy and water, and more efficient breeds and crops) or cultivating more land. Either way, biodiversity suffers.

One sign of progress is the steady increase in protected areas. But they must be effectively managed and properly enforced. And biodiversity (of all sorts, not just the "charismatic megafauna" like tigers and elephants) will increasingly need conserving outside protected areas as well.

**Regional Pressures:** This is the first GEO report in which all seven of the world's regions emphasize the potential impacts of climate change. In **Africa, land degradation and even** desertification are threats; per capita food production has declined by 12 per cent since 1981. Unfair agricultural subsidies in developed regions continue to hinder progress towards increasing yields. Priorities for **Asia and the Pacific** include urban air quality, fresh water stress, degraded ecosystems, agricultural land use and increased waste. Drinking water provision has made remarkable progress in the last decade, but the illegal traffic in electronic and hazardous waste is a new challenge. **Europe's** rising incomes and growing numbers of households are leading to unsustainable production and consumption, higher energy use, poor urban air quality, and transport problems. The region's other priorities are biodiversity loss, land-use change and freshwater stresses.

**Latin America and the Caribbean** face urban growth, biodiversity threats, coastal damage and marine pollution, and vulnerability to climate change. But protected areas now cover about 12 per cent of the land, and annual deforestation rates in the Amazon are falling. **North America** is struggling to address climate change, to which energy use, urban sprawl and freshwater stresses are all linked. Energy efficiency gains have been countered by the use of larger vehicles, low fuel economy standards, and increases in car numbers and distances travelled. For **West Asia** the priorities are freshwater stresses, degradation of land, coasts and marine ecosystems, urban management, and peace and security. Water-borne diseases and the sharing of international water resources are also concerns. The **Polar Regions** are already feeling the impacts of climate change. The food security and health of indigenous peoples are at risk from increasing mercury and persistent organic pollutants in the environment. The ozone layer is expected to take another half-century to recover.



## The Future

*GEO-4* acknowledges that technology can help to reduce people's vulnerability to environmental stresses, but says there is sometimes a need "to correct the technology-centred development paradigm". It explores how current trends may unfold by 2050 in four scenarios.

The real future will be largely determined by the decisions individuals and society make now, *GEO-4* says: "Our common future depends on our actions today, not tomorrow or some time in the future."

For some of the persistent problems the damage may already be irreversible. *GEO-4* warns that tackling the underlying causes of environmental pressures often affects the vested interests of powerful groups able to influence policy decisions. The only way to address these harder problems requires moving the environment from the periphery to the core of decision-making: environment for development, not development to the detriment of environment.

"There have been enough wake-up calls since Brundtland. I sincerely hope *GEO-4* is the final one. The systematic destruction of the Earth's natural and nature-based resources has reached a point where the economic viability of economies is being challenged—and where the bill we hand on to our children may prove impossible to pay," said Mr Steiner.

The *GEO-4* report concludes that "while governments are expected to take the lead, other stakeholders are just as important to ensure success in achieving sustainable development. The need couldn't be more urgent and the time couldn't be more opportune, with our enhanced understanding of the challenges we face, to act now to safeguard our own survival and that of future generations"

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### Notes to Editors

*GEO-4* is produced and published by the Division of Early Warning and Assessment of the United Nations Environment Programme. It is available from [www.unep.org/geo/geo4/](http://www.unep.org/geo/geo4/)

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## Key facts from the report

### Atmosphere

There is now “visible and unequivocal” evidence of the impacts of climate change, and consensus that human activities have been decisive in this change: global average temperatures have risen by about 0.74°C since 1906. A best estimate for this century’s rise is expected to be between a further 1.8°C and 4°C. Some scientists believe a 2°C increase in the global mean temperature above pre-industrial levels is a threshold beyond which the threat of major and irreversible damage becomes more plausible.

Ice cores show that the levels of carbon dioxide (CO<sub>2</sub>) and methane are now far outside their ranges of natural variability over the last 500 000 years: the Earth’s climate has entered a state unparalleled in recent prehistory. The average temperatures in the Arctic are rising twice as rapidly as in the rest of the world.

Sea-level rise caused by thermal expansion of water and the melting of glaciers and ice sheets will continue for the foreseeable future, with potentially huge consequences: over 60 per cent of the population worldwide lives within 100 kilometres of the coast.

Growing ocean acidification and warmer temperatures will probably also affect global food security. Diarrhoea and malaria will become more widespread.

Present trends do not favour greenhouse gas stabilisation. Aviation saw an 80 per cent increase in miles flown between 1990 and 2003, while shipping rose from 4 billion tonnes of goods loaded in 1990 to 7.1 billion tonnes in 2005: each sector makes huge and increasing energy demands.

Some greenhouse gases may persist in the atmosphere for up to 50 000 years.

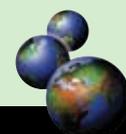
Despite “impressive” success in phasing out ozone-depleting substances, the spring “hole” in the stratospheric ozone layer over the Antarctic is now larger than ever, allowing harmful ultraviolet solar radiation to reach the Earth.

Acid rain is now much less of a problem in Europe and North America (“one of the success stories of recent decades”), but more challenging in countries like Mexico, India and China.

### Pollution

More than 50 000 compounds are used commercially, hundreds more are added annually, and global chemical production is projected to increase by 85 per cent over the next 20 years.

Environmental exposure causes almost a quarter of all diseases. More than two million people worldwide are estimated to die prematurely every year from indoor and outdoor air pollution.



Some of the progress achieved in reducing pollution in developed countries has been at the expense of the developing world, where industrial production and its impacts are now being exported.

## Food

Losses in total global farm production, due to insect pests, have been estimated at about 14 per cent.

Since 1987 the expansion of cropland has slackened, but land use intensity has increased dramatically. Annually on average, a farmer then produced one tonne: output is now 1.4 tonnes. A hectare of cropland, which then yielded on average 1.8 tonnes, now produces 2.5 tonnes.

Unsustainable land use is causing degradation, a threat as serious as climate change and biodiversity loss. It affects up to a third of the world's people, through pollution, soil erosion, nutrient depletion, water scarcity, salinity, and disruption of biological cycles.

The food security of two-thirds of the world's people depends on fertilisers, especially nitrogen.

Population growth, over-consumption and the continued shift from cereal to meat consumption mean food demand will increase to 2.5–3.5 times the present figure.

By 2030 developing countries will probably need 120 million more hectares to feed themselves.

The loss of genetic diversity may threaten food security: 14 animal species make up 90 per cent of all livestock, and 30 crops dominate agriculture, providing an estimated 90 per cent of the world's calories.

## Biodiversity

About 60 per cent of the ecosystem services that have been assessed are degraded or used unsustainably; populations of freshwater vertebrates declined on average by nearly 50 per cent from 1987 to 2003, much faster than terrestrial or marine species.

Over half the world's 6 000 languages are endangered, and some believe up to 90 per cent of all languages may not survive this century.

## Water

Of the world's major rivers, 10 per cent fail to reach the sea for part of each year because of irrigation demands.

In developing countries some 3 million people die annually from water-borne diseases, most of them under-five-year-olds. An estimated 2.6 billion people lack improved sanitation services. By 2025, water withdrawals are predicted to have risen by 50 per cent in developing countries and by 18 per cent in the developed world.



There is rising concern about the potential impacts on aquatic ecosystems, of personal-care products and pharmaceuticals such as painkillers and antibiotics.

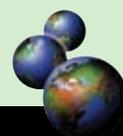
## **The Unequal World**

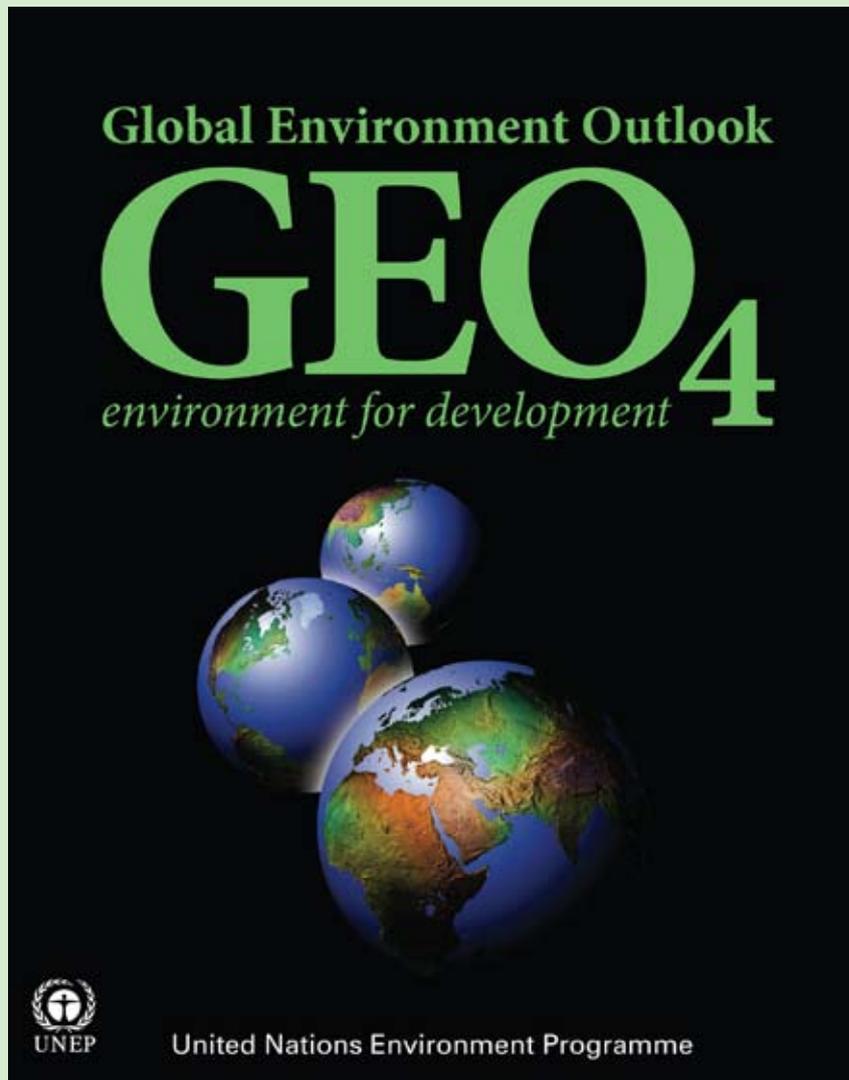
The world has changed radically since 1987, economically, socially and politically. Population has increased by almost 34 per cent, trade is almost three times greater, and average income per head has gone up by about 40 per cent.

Consumption has been growing faster than population, but unequally: the total annual income of nearly 1 billion people, the population of the richest countries, is almost 15 times that of the 2.3 billion people in the poorest countries.

There are fewer resources to share: the amount of land per capita is about a quarter of what it was a century ago, and is expected to fall to about one-fifth of the 1900 level by 2050.

Urbanization is a significant pressure: by 2025 coastal populations alone are expected to reach six billion. The year 2007 is the first in human history when more than half of all people live in cities.





The Global Environment Outlook (GEO) is UNEP's flagship assessment process and report series. The fourth report in the series, GEO-4 provides an overview of the global and regional environmental, social and economic state-and-trends over the past two decades. It highlights the interlinkages, challenges and opportunities which the environment provides for development and human well-being. The report also presents an outlook, using four scenarios to explore plausible futures to the year 2050, as well as policy options to address present and emerging environmental issues.

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